

## PRELIMINARY CHECKLIST OF THE MAYFLIES (EPHEMEROPTERA) OF ALABAMA<sup>1</sup>

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**ABSTRACT:** One hundred and twelve species of mayflies, including 35 new state records are identified for Alabama. The richness of fauna is indicative of the physiographic diversity represented in the state.

The many available records of Alabama mayflies were first assembled by Berner (1977). Many more state records, as well as additional distributional data within the state, have been added since the initial compilation of Berner. Much of this new information has been the result of an intensive survey of aquatic insects in Alabama begun in 1981 by one of us (SCH). Additional records have resulted from the research efforts of other workers in Alabama.

The richness of the mayfly fauna in Alabama is indicative of the range of physiographic regions represented in the state. These include the East Gulf Coastal Plain, Piedmont Plateau, Valley and Ridge, and Appalachian Plateau, including the Highland Rim Plateau and Cumberland Plateau subregions (Fig. 1).

The following preliminary checklist follows the classification scheme of McCafferty and Edmunds (1979). A total of 15 families, 45 genera and 112 species are included. These records are the result of light trapping and aerial netting for adults as well as the collection of nymphs. The 35 new state records are each indicated by an asterisk. County records (numbers) referring to figure 1 follow each species.

### Siphonuridae

\**Ameletus lineatus* Traver. 1, 3, 25.

This species, a possible synonym of the more northern *A. ludens* Needham, has been collected only from springs.

\**Siphonurus quebecensis* (Provancher). 2, 4, 14.

Three males and six females of this widespread eastern species were collected in light traps from April to May.

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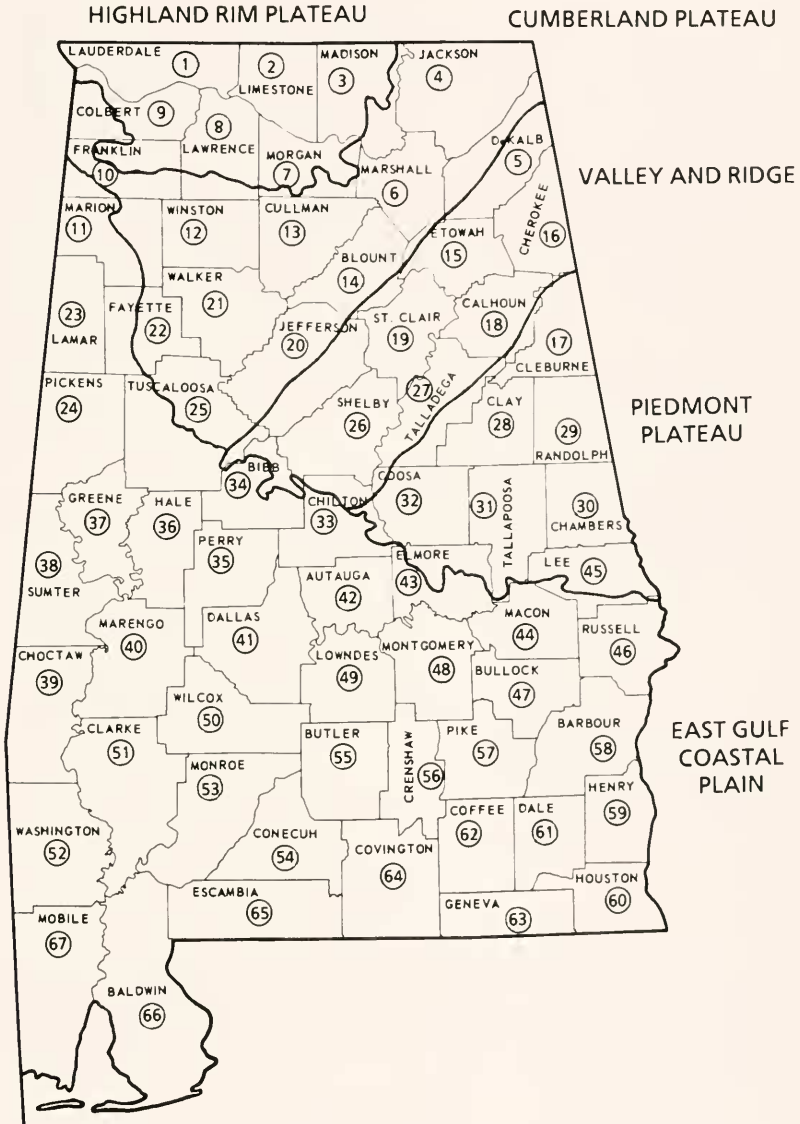


Figure 1. Counties and physiographic provinces of Alabama.

## Baetidae

*Baetis amplus* (Traver). 12, 15, 21, 32, 34, 35, 40, 41, 44, 52, 53, 60, 65-67. This species is widely distributed in Alabama, with adults emerging from February to May, and apparently is univoltine.

*Baetis ephippiatus* Traver. 12, 21, 25, 32, 35, 44, 57, 64, 65, 66, 67. This species and the following four are most abundant in Coastal Plain streams. Adults were collected throughout the warm months.

*B. frondalis* McDunnough. 10, 14, 25, 53, 60, 64-67.

*B. intercalaris* McDunnough. 1, 14, 18, 26, 32-35, 41, 43, 44, 58-61, 64, 67.

*B. propinquus* (Walsh). 1, 11, 25, 29, 32-34, 38, 41, 43, 44, 49, 52, 53, 57, 59, 60, 61, 64-67.

*B. pygmaeus* (Hagen). 1, 20, 21, 25, 34, 41, 53, 54, 60, 65-67.

*B. tricaudatus* Dodds. 3, 14.

Several adults (April to June) assignable to this apparently geographically wide ranging species were collected from small, cool streams of the Appalachian Plateaus.

*Callibaetis floridanus* Banks. 35, 53, 58, 60, 65-67.

The recent revision by Check (1982), allows separation of the species of *Callibaetis*. No males of this species were collected in light traps.

\**C. fluctuans* (Walsh). 23.

Two males were collected in a light trap of this more northern and midwestern species.

*C. pretiosus* Banks. 65-67.

*Centroptilum hobbsi* Berner. 32, 34, 35, 44, 58, 60.

\**C. fragile* McDunnough. 4.

Two males apparently of this species were collected in April from a small stream.

*C. viridocularis* Berner. 34, 43, 44, 66, 67.

\**Cloeon alamance* (Traver). 29.

Several mature nymphs of this species were collected from a medium-size tributary of the Tallapoosa River.

*C. rubropictum* McDunnough. 5, 26, 41, 44, 64.

\**Heterocloeon curiosum* (McDunnough). 29.

Two males and three females were collected in June from the Tallapoosa River.

*Pseudocloeon bimaculatum* Berner. 44, 60, 65-67.

*P. carolina* Banks. 1, 14, 21, 23, 32, 34.

*P. dubium* (Walsh). 11, 34, 35, 64.

*P. parvulum* McDunnough. 1, 25, 32-34, 44.

*P. punctiventris* McDunnough. 5, 11, 14, 21, 32, 38, 44, 60.

*Paracloeodes* sp. 5, 32, 34, 35.

## Metretopodidae

\**Siphloplecton basale* (Walker). 23.

Fifteen males and three females were collected March 13 from Little Yellow Creek and Mill Creek. Berner (1978) previously listed North Carolina as the most southern record for this transcontinental species.

*S. speciosum* Traver. 22, 23, 51, 66.

## Oligoneuriidae

*Homoeoneuria cahabensis* Pescador and Peters. 35.

Originally described from a large series of specimens from the Cahaba River, it is also known from Mississippi. No additional specimens were collected during this study.

*Isonychia arida* (Say). 11, 12, 18, 21, 24, 25, 34, 35, 40, 41, 44, 52, 53, 55, 58, 60, 64, 65, 67.

This species is most abundant in medium-size streams with shifting sand substrate and is the most common *Isonychia* of Alabama.

*I. bernerii* Kondratieff and Voshell. 65-67.

This is a species of the Coastal Plain, collected frequently from Turkey and Sandy Creek in Baldwin County from May to June.

*I. bicolor* (Walker). 14-18, 20-22, 25, 27, 32-35, 44, 45.

This eastern North American species has been collected from the Piedmont Valley and Ridge and Cumberland Plateau physiographic provinces.

\**I. georgiae* McDunnough. 6, 13, 25, 31, 33, 42.

This species has been previously reported from Virginia, North Carolina and Georgia (Kondratieff and Voshell 1984). Adults were collected from cool streams of the plateaus and Valley and Ridge provinces in May and June.

\**I. sayi* Burks. 33.

\**I. similis* Traver. 10.

This species is common in low order mountain streams of Virginia, Tennessee, North Carolina, and South Carolina. The only Alabama record is from a small, cool stream on the Highland Rim Plateau in August.

#### Heptageniidae

\**Cinygmula subaequalis* (Banks). 2, 4.

This species was collected from several small, cool streams of the Highland Rim Plateau in April.

\**Epeorus rubidus* (Traver). 4, 10.

Four males were collected in June from two small, cool streams.

\**E. vitreus* (Walker). 1, 14.

This species emerges in May and June and was represented by six males.

*Heptagenia flavescens* (Walsh). 5, 41.

*H. marginalis* Banks. 5, 17, 18, 25.

*H. pulla* (Clemens). 5, 13.

*Leucrocota aphrodite* (McDunnough). 1, 5, 15, 16, 18, 20, 21, 25, 27, 32, 34, 66.

*L. hebe* (McDunnough). 11, 13, 14.

*L. juno* (McDunnough). 5, 25.

Two males were collected from Wallace Branch, Tuscaloosa County.

*L. maculipennis* (Walsh). 9, 17, 20, 34, 35, 38, 41, 53.

*L. minerva* (McDunnough). 17, 25, 27, 34.

*Macdunnoa persimplex* (McDunnough). 44.

\**M. brunnea* Flowers. 8.

\**Nixe rusticalis* (McDunnough). 8.

Three males apparently of this species was collected from a medium-size stream in June.

*Pseudiron centralis* McDunnough. 41.

\**Rhithrogena amica* Traver. 10.

One male of this species was collected in a light trap in June.

*R. pellucida* Daggy. 1, 35.

*R. uhari* Traver. 25, 35.

\**Stenacron carolina* (Banks). 1, 2.

This Appalachian species was represented by a few specimens collected in May from several low order cool streams on the Highland Rim Plateau.

*S. interpunctatum* (Say). 1, 5, 8, 9, 12, 15, 16, 18-23, 25, 26, 28, 31, 34, 37, 41, 43, 45, 52-55, 65-67.

- This variable species is common in small to large streams with slow to fast current, throughout Alabama. Some adults approached *S. floridense* (Lewis). No nymphs of the latter species were available.
- Stenonema exiguum* Traver. 1, 13-16, 18, 20, 25, 27, 34, 35, 40, 41, 44, 45, 52, 53, 55, 58, 60, 65-67.
- S. femoratum* (Say). 1, 7, 8, 10-15, 18, 20-22, 25, 27, 34, 38, 49, 51, 55.  
This is primarily a species of smaller streams and spring runs throughout Alabama.
- S. ithaca* (Clemens and Leonard). 1, 2.  
Six males and two females of this Appalachian species were collected from several cool streams on the Highand Rim Plateau.
- S. mediopunctatum* McDunnough. 5, 14.
- \**S. merivulvanum* Carle and Lewis. 10, 25.  
This species was restricted to springs and small spring-fed spring runs of the Cumberland Plateau.
- S. mexicanum integrum* (McDunnough). 34, 37, 38, 41, 43, 45, 53, 58, 60, 64-67.
- S. modestum* (Banks). 1, 2, 10-12, 14, 15, 17, 18, 20, 21, 25, 27, 33.  
This variable species was difficult to separate from *S. smithae* as adults, but was generally distributed north of the Fall Line.
- S. pudicum* (Hagen) 2, 23.
- S. smithae* Traver. 19, 20, 25, 34, 40, 41, 44, 49, 51, 54, 58, 60, 61, 65, 66, 67.  
This species was predominant in the coastal plain region, often collected in large numbers in light traps from medium to large streams throughout the warm months. The type locality of this species is Tuscaloosa Co., Alabama.
- S. terminatum* (Walsh). 8, 13, 21, 34, 35, 41.

#### Leptophlebiidae

- Choroterpes hubbelli* Berner. 4, 36, 41.
- Habrophlebia vibrans* Needham. 25, 51, 65.
- Habrophlebiodes americana* (Banks). 2, 10, 13, 17, 22, 25.  
Adults of this species was commonly collected from Tyro Creek (Tuscaloosa County) in June.
- H. brunneipennis* Berner. 54, 59, 65, 67.  
A total of 12 males of this species were collected from small streams of the Coastal Plain.
- Leptophlebia bradleyi* Needham. 4, 66.  
This early emerging species (December and February) was represented by three males.
- \**L. cupida* (Say). 1, 2, 10, 14, 16.  
This apparent variable species was collected in April and May from several localities.
- L. intermedia* (Traver). 60.
- \**Paraleptophlebia debilis* (Walker). 25.  
This record represents the southernmost limit of this species (Berner 1975).
- P. jeanae* Berner. 38. The type locality of this species is Sumter Co., Alabama.
- \**P. ontario* (McDunnough). 2.  
*Paraleptophlebia georgiana* Traver, originally described from Dalton Co., Georgia is a probable synonym of the species.
- P. volitans* (McDunnough). 5, 41, 43, 53, 54, 64-67.  
This is the common *Paraleptophlebia* of the Coastal Plain. Light trap collections were usually represented by single imagoes or subimagoes.

## Potamanthidae

\**Potamanthus distinctus* Traver. 25.

\**P. neglectus* Traver. 3, 16.

Adults of *Potamanthus* are difficult to identify from alcohol preserved material. Males were usually collected, with only few females available. Paint Rock River (Madison Co.) produced many males of *P. neglectus*.

## Polymitarcyidae

\**Ephoron leukon* Williamson. 14, 17, 39, 67.

*Tortopus incertus* (Traver). 34, 35, 41, 58, 67.

Large numbers of adults were collected from the Alabama and Mobile Rivers in July and August.

## Ephemeridae

\**Ephemera guttulata* Pictet. 1, 4.

Three females were collected in early May from a stream in each county.

\**E. varia* Eaton. 25.

Five males and three females were collected in May from a small, cool stream.

*Hexagenia bilineata* (Say). 1, 9, 11, 25, 33, 51, 52, 66, 67.

*H. limbata* Serville. 1, 4, 5, 8, 10-21, 23-27, 33, 35, 36, 39, 43, 44, 52, 53, 55, 57-60, 64, 66, 67.

This species is the most common mayfly found in Alabama, distributed throughout the state, and has been collected from all types of lentic and lotic habitats. We follow McCafferty (1984) in placing *H. munda* Eaton as a synonym.

## Palingeniidae

*Pentagenia vittigera* Walsh. 35, 41, 52, 66, 67.

Many adults were collected from the Little River (Baldwin Co.) and the Mobile River (Mobile Co.) in July - August. All are situated on the Coastal Plain.

## Ephemerellidae

*Attenella attenuata* (McDunnough). 14, 25, 32, 34, 44, 65.

*Dannella simplex* (McDunnough). 18.

*Drunella conestee* (Traver). 5.

\**D. tuberculata* (Morgan). 1, 4.

Several nymphs were collected from tributaries of the Tennessee and Elk Rivers.

\**Ephemerella catawaba* Traver. 5, 25.

\**E. dorothea* Needham. 2.

\**E. inconstans* Traver. 18.

Five males and eight females were collected from Blue Springs Creek on 18 April.

*E. invaria* (Walker). 2, 3, 13, 14, 34, 45.

*E. needhami* McDunnough. 5, 14, 16.

\**Eurylophella funeralis* (McDunnough). 13.

Three mature nymphs were collected from a small stream in April.

*E. temporalis* (McDunnough). 12, 14, 16, 18, 25, 34, 49, 53, 65-67.

*Serratella deficiens* (Morgan). 1, 14, 15, 21, 25, 26, 32, 34, 41, 43, 44, 53, 60, 64, 65, 67.

*S. serratoides* (McDunnough). 5, 9, 14, 15, 17, 26, 32, 53, 65.

*S. sordida* (McDunnough). 5, 15, 21, 35.

## Tricorythidae

\**Leptohypes dolani* Allen. 15.

Two nymphs were collected in August from the Coosa River.

*Tricorythodes albilineatus* Berner. 4, 34, 35, 41, 59, 65.

*Tricorythodes* sp. 1, 5, 21, 29, 32-35, 39, 41, 43, 44, 64, 67.

## Neoephemeridae

*Neoephemera youngi* Berner. 43, 44, 65.

## Caenidae

*Brachycercus prudens* (McDunnough). 35.

*Brachycercus* sp. 14, 25.

*Caenis anceps* Traver. 16.

*C. diminuta* Walker. 15, 17, 25, 34, 35, 37, 44, 53, 58, 60, 66, 67.

*C. hilaris* (Say). 5, 15, 16, 21, 25, 32, 34-36, 41, 44, 53, 58, 59, 65.

*C. jocosus* McDunnough. 1, 21, 34.

\**C. simulans* McDunnough. 15, 25, 53.

## Baetiscidae

*Baetisca becki* Schneider and Berner. 28, 52.

\**B. gibbera* Berner. 65.

\**B. obesa* (Say). 22, 65.

*B. rogersi* Berner. 25, 58, 64, 65.

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